

Serial No. 10/791,088
Atty. Doc. No. 2002P18158US

Amendments to the Claims:

Please amend the claims as shown. Applicants reserve the right to pursue any canceled claims at a later date.

1. (currently amended) A method for cooling thermally stressed regions in a turbo machine, comprising:

flowing a flow medium through the turbo machine to an exhaust-steam region defined by a housing of the turbo machine itself during operation of the turbo machine;

flowing a portion of the flow medium from a live-steam feed line to a heat exchanger disposed in the exhaust-steam region;

cooling the portion of the flow medium in the heat exchanger;

flowing the cooled portion of the flow medium into an inflow region of the turbo machine; and

cooling thermally stressed regions that are located in the inflow region autonomously with only the portion of the flow medium from the live-steam feed line that has been cooled by the heat exchanger without using a separate external line for supply of cooling steam.

2. (cancelled)

3. (currently amended) The method as claimed in claim 2, wherein the portion of the flow medium that enters the heat exchanger is removed downstream of a shut-off valve located in the live-steam feed line.

4. (previously presented) The method as claimed in claim 3, wherein the temperature of the portion of the flow medium cooled in the heat exchanger is at least 10°C below the temperature of the live steam.

5. (previously presented) The method as claimed in claim 3, wherein the temperature of the portion of the flow medium cooled in the heat exchanger is at least 20°C below the temperature of the live steam.

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6. (previously presented) The method as claimed in claim 1, wherein the portion of the flow medium cooled by the heat exchanger is passed to a thrust-compensating piston.

7. (currently amended) An autonomously cooled turbo machine, comprising:
a live-steam inflow region of the turbo machine in fluid communication with a live-steam feed line through which a flow medium flows, the live-steam feed line having a branch with which part of the flow medium is passed via a line to a heat exchanger within an exhaust region of the turbo machine defined by a housing of the turbo machine; and
a discharge line arranged downstream of the heat exchanger leading into an inflow region of the turbo machine for delivering the part of the flow medium having been cooled in the heat exchanger for cooling a thermally stressed region of the turbo machine without using a separate external line for supply of cooling steam from a source other than the live-steam feed line.

8. (cancelled)

9. (previously presented) The turbo machine as claimed in claim 7, wherein the live-steam feed line has a shut-off valve located upstream of the branch.

10. (canceled)

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11. (currently amended) A turbo machine having autonomously cooled internal components, comprising:

a live-feed flow line that flows a medium through a turbo machine and exits into an exhaust region defined by a housing of the turbo machine;

a branch line extending from the live-feed line and adapted to pass a portion of the flow medium to a heat exchanger disposed in the exhaust region of the turbo machine; and

a feed line arranged downstream of the heat exchanger leading into an inflow region of the turbo machine to provide cooled steam to a stressed region of the turbo machine ~~without using a separate external line for supply of cooling steam.~~

12. (cancelled)

13. (previously presented) The turbo machine as claimed in claim 11, wherein the live-steam feed line has a shut-off valve located upstream of the branch.

14. (previously presented) The turbo machine as claimed in claim 11, wherein the feed line downstream of the heat exchanger supplies flow to a thrust-compensating piston.